

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-8 (canceled)

Claim 9 (previously presented): An exhaust aftertreatment combined filter and catalytic converter comprising a plurality of flow channels each having both: a) a flow-through channel catalytically reacting with exhaust; and b) a wall-flow channel trapping particulate, wherein said exhaust aftertreatment combined filter and catalytic converter comprises a plurality of sheets, at least one of which comprises a filter media sheet, said sheets defining said plurality of flow channels, including flow-through channels catalytically reacting with said exhaust and including wall-flow channels in the same said flow channels as said flow-through channels and passing exhaust through said filter media sheet and trapping particulate thereat, wherein exhaust flows axially through said exhaust aftertreatment combined filter and catalytic converter, and wherein said flow-through channels and said wall-flow channels have axially overlapped channel sections in said flow channels, and wherein exhaust flows axially through said exhaust aftertreatment combined filter and catalytic converter from an upstream end to a downstream end, said filter media sheet has a first face facing upstream and has a second face facing downstream, each said flow-through channel has a portion extending downstream from said second face of said filter media sheet, and wherein said exhaust aftertreatment combined filter and catalytic converter comprises first, second and third serially sequential surfaces in each said flow channel, wherein said exhaust flows firstly along and through said first sequential surface, then secondly along and through said second sequential surface, then thirdly along said third sequential surface, wherein said first face of said filter media sheet is said first sequential surface, said second face of said filter media sheet is said second sequential surface, and said overlapped section of said flow-through channel is said third sequential surface.

Claim 10 (original): The exhaust aftertreatment combined filter and catalytic converter according to claim 9 wherein at least one of said first, second and third serially sequential surfaces is catalytically treated.

Claim 11 (original): The exhaust aftertreatment combined filter and catalytic converter according to claim 10 wherein each of said first, second and third serially sequential surfaces is catalytically treated.

Claim 12 (previously presented): An exhaust aftertreatment combined filter and catalytic converter comprising a plurality of flow channels each having both: a) a flow-through channel catalytically reacting with exhaust; and b) a wall-flow channel trapping particulate wherein said exhaust aftertreatment combined filter and catalytic converter comprises a plurality of sheets, at least one of which comprises a filter media sheet, said sheets defining said plurality of flow channels, including flow-through channels catalytically reacting with said exhaust and including wall-flow channels in the same said flow channels as said flow-through channels and passing exhaust through said filter media sheet and trapping particulate thereat, wherein exhaust flows axially through said exhaust aftertreatment combined filter and catalytic converter, and wherein said flow-through channels and said wall-flow channels have axially overlapped channel sections in said flow channels, and wherein exhaust flows axially through said exhaust aftertreatment combined filter and catalytic converter from an upstream end to a downstream end, said filter media sheet has a first face facing upstream and has a second face facing downstream, each said flow-through channel has a portion extending upstream from said first face of said filter media sheet, and wherein said exhaust aftertreatment combined filter and catalytic converter comprises first, second and third serially sequential surfaces in each said flow channel, wherein said exhaust flows firstly along said first sequential surface, then secondly along and through said second sequential surface, then thirdly along and through said third sequential surface, wherein said portion of said flow-through channel

is said first sequential surface, said first face of said filter media sheet is said second sequential
20 surface, and said second face of said filter media sheet is said third sequential surface.

Claim 13 (original): The exhaust aftertreatment combined filter and catalytic converter according to claim 12 wherein at least one of said first, second and third serially sequential surfaces is catalytically treated.

Claim 14 (original): The exhaust aftertreatment combined filter and catalytic converter according to claim 13 wherein each of said first, second and third serially sequential surfaces is catalytically treated.

Claim 15 (previously presented): An exhaust aftertreatment combined filter and catalytic converter comprising a plurality of flow channels each having both: a) a flow-through channel catalytically reacting with exhaust; and b) a wall-flow channel trapping particulate wherein said exhaust aftertreatment combined filter and catalytic converter comprises a plurality of sheets, at least one of
5 which comprises a filter media sheet, said sheets defining said plurality of flow channels, including flow-through channels catalytically reacting with said exhaust and including wall-flow channels in the same said flow channels as said flow-through channels and passing exhaust through said filter media sheet and trapping particulate thereat, wherein exhaust flows axially through said exhaust aftertreatment combined filter and catalytic converter, and wherein said flow-through channels and
10 said wall-flow channels have axially overlapped channel sections in said flow channels, and, wherein the combination of said flow-through channels and said wall-flow channels have three catalytically treated surfaces in each said flow channel.

Claim 16 (original): The exhaust aftertreatment combined filter and catalytic converter according to claim 15 wherein exhaust flows axially through said exhaust aftertreatment combined filter and catalytic converter from an upstream end to a downstream end, said filter media sheet has a first

face facing upstream and has a second face facing downstream, each said flow-through channel has
5 a portion extending downstream from said second face of said filter media sheet, said three
catalytically treated surfaces comprise first, second and third serially sequential surfaces, wherein
said exhaust flows firstly along and through said first sequential catalytically treated surface, then
secondly along and through said second sequential catalytically treated surface, then thirdly along
10 said third sequential catalytically treated surface, and wherein said first face of said filter media
sheet is said first sequential catalytically treated surface, said second face of said filter media sheet
is said second sequential catalytically treated surface, and said overlapped section of said flow-
through channel is said third sequential catalytically treated surface.

Claim 17 (original): The exhaust aftertreatment combined filter and catalytic converter according
to claim 15 wherein exhaust flows axially through said exhaust aftertreatment combined filter and
catalytic converter from an upstream end to a downstream end, said filter media sheet has a first
face facing upstream and has a second face facing downstream, each said flow-through channel has
5 a portion extending upstream from said first face of said filter media sheet, said three catalytically
treated surfaces comprise first, second and third serially sequential surfaces, wherein said exhaust
flows firstly along said first sequential catalytically treated surface, then secondly along and
through said second sequential catalytically treated surface, then thirdly along and through said
third sequential catalytically treated surface, and wherein said portion of said flow-through channel
10 is said first sequential catalytically treated surface, said first face of said filter media sheet is said
second sequential catalytically treated surface, and said second face of said filter media sheet is said
third sequential catalytically treated surface.

Claims 18-90 (canceled)

Claim 91 (previously presented): The exhaust aftertreatment combined filter and catalytic
converter according to claim 9 wherein exhaust flows axially along an axial flow direction along an

axis, and wherein said sheets comprise first, second and third sheets, said second sheet being pleated and forming with said first sheet a plurality of axially extending flow channels, said second
5 sheet having a plurality of pleats defined by wall segments extending in alternating manner between pleat tips at axially extending bend lines, the pleat tips on one side of said second sheet being contiguous relation with said first sheet, said third sheet having a plurality of pleats defined by wall segments extending in zig-zag manner between pleat tips at transversely extending bend lines which extend transversely to said axis and transversely to said first sheet, said first sheet extending
10 axially and extending laterally relative to said transversely extending bend lines of said pleat tips of said third sheet.

Claim 92 (previously presented): The exhaust aftertreatment combined filter and catalytic converter according to claim 91 wherein said axis and said transverse extension of said pleat tips of said third sheet and said lateral extension of said first sheet are all orthogonal relative to each other.

Claim 93 (previously presented): The exhaust aftertreatment combined filter and catalytic converter according to claim 12 wherein exhaust flows axially along an axial flow direction along an axis, and wherein said sheets comprise first, second and third sheets, said second sheet being pleated and forming with said first sheet a plurality of axially extending flow channels, said second
5 sheet having a plurality of pleats defined by wall segments extending in alternating manner between pleat tips at axially extending bend lines, the pleat tips on one side of said second sheet being contiguous relation with said first sheet, said third sheet having a plurality of pleats defined by wall segments extending in zig-zag manner between pleat tips at transversely extending bend lines which extend transversely to said axis and transversely to said first sheet, said first sheet extending
10 axially and extending laterally relative to said transversely extending bend lines of said pleat tips of said third sheet.

Appl. No. 10/075,035
Amendment dated May 5, 2006
Reply to Office action of March 17, 2006

Claim 94 (previously presented): The exhaust aftertreatment combined filter and catalytic converter according to claim 93 wherein said axis and said transverse extension of said pleat tips of said third sheet and said lateral extension of said first sheet are all orthogonal relative to each other.